

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ~~Method~~ method of correlating the ~~ability~~ FcαRI induced function of a cell expressing FcαRI ~~to bind IgA~~ and cellular susceptibility to a disease, said method comprising:

identifying a FcαRI ~~genotype~~ genotype of said cell for FcαRI alleles selected from the group consisting of: FcαRIa 87R/87R, FcαRIA 92D/92N, FcαRIa 132F/132L, FaRI 245P/245L and FcαRI 248S/248G;

quantifying ~~IgA-binding~~ an FcαRI induced function selected from the group consisting of: FcαRI specific phagocytosis, oxidative burst and cytokine production by said cell expressing said FcαRI ~~genotype~~ genotype; and

comparing ~~IgA-binding~~ FcαRI induced function by said cell and ~~IgA-binding~~ FcαRI induced function by a second cell, said second cell expressing a second FcαRI genotype, wherein correlation of the ~~ability of said cell to bind IgA~~ FcαRI induced function and ~~cellular~~ cellular susceptibility to disease is indicated by a difference in ~~IgA-binding~~ FcαRI induced function detected by said comparing.

2. (Original) The method of claim 1 wherein said FcαRI genotype differs from said second FcαRI genotype by a point mutation.

3. (Original) The method of claim 2 wherein said point mutation is a silent mutation.

4. (Original) The method of claim 2 wherein said point mutation is a frame shift mutation.

5. (Original) The method of claim 2 wherein said point mutation is a missense mutation.

6. (Original) The method of claim 3 wherein said silent mutation is in codon 87 of said Fc α RI genotype.

7. (Original) The method of claim 3 wherein said silent mutation is in codon 92 of said Fc α RI genotype.

8. (Original) The method of claim 5 wherein said missense mutation is at codon 132 of said Fc α RI genotype.

9. (Original) The method of claim 5 wherein said missense mutation is at codon 245 of said Fc α RI genotype.

10. (Original) The method of claim 5 wherein said missense mutation is at codon 248 of said Fc α RI genotype.

11. (Original) The method of claim 1 wherein said disease is selected from the group consisting of: periodontal disease, cancer, viral infection, bacterial infection, systemic lupus

erythematosus, systemic vasculitis, IgA nephropathy, rheumatoid arthritis, systemic sclerosis, dermatomyositis, Hashimoto's thyroiditis, inflammatory bowel disease and Sjogren's syndrome.

12. (Original) The method of claim 1 wherein said cell is selected from the group consisting of: a neutrophil, a monocyte, a myeloid cell, and a mucus secreting cell.

13. (Currently Amended) A method for determining Fc α RI alleles specific to an individual human, said method comprising: genotyping DNA encoding Fc α RI for a polymorphism affecting an Fc α RI induced function selected from the group consisting of: Fc α RIa 87R/87R, Fc α RIA 92D/92N, Fc α RIa 132F/132L, F α RI 245P/245L and Fc α RI 248S/248G, said DNA being obtained from said individual human.

14. (Original) The method of claim 13 wherein said polymorphism affects IgA binding by a Fc α RI receptor.

15. (Original) The method of claim 13 wherein said polymorphism affects signal transduction.

16. (Original) The method of claim 13 wherein said polymorphism is a single nucleotide polymorphism.

17. (Original) The method of claim 13 wherein said polymorphism is a microsatellite polymorphism.

18. (Original) The method of claim 13 wherein said polymorphism is a splice isoform.

19. (Original) The method of claim 13 wherein said polymorphism is in the glycosylation sites of Fc α RI.

20. (Original) The method of claim 13 wherein genotyping utilizes PCR typing with a sequence specific primer for a polymorphic exon.

21. (Currently Amended) The method of claim 20 wherein said primer is selected from the group consisting of ~~those shown in Example 4~~ SEQ ID No. 1, SEQ ID No. 2, SEQ ID No. 3, or SEQ ID No. 4.

22. (Withdrawn) A method for correlating the ability of a cell to bind IgA, and cellular susceptibility to a disease, said method comprising:

identifying a Fc α RI phenotype of said cell;

quantifying IgA binding by said cell; and

comparing IgA binding by said cell to that of a second cell, said second cell having a second phenotype Fc α RI.

23. (Withdrawn) The method of claim 22 wherein identifying said Fc α RI phenotype utilizes amino acid sequencing.

24. (Withdrawn) The method of claim 22 wherein identifying said FcαRI phenotype utilizes glycosylate characterization.

25. (Withdrawn) The method of claim 22 wherein identifying said FcαRI phenotype utilizes antibody binding.

26. (Previously Presented) A method of prognosticating a human immunoresponse to a disease, said method comprising:

establishing a correlation between a FcαRI genotype for a FcαRI alleles selected from the group consisting of: FcαRIa 87R/87R, FcαRIA 92D/92N, FcαRIa 132F/132L, FaRI 245P/245L and FcαRI 248S/248G and clinical outcome of said disease;

genotyping a patient for FcαRI to yield a patient FcαRI genotype;

comparing said FcαRI genotype with said patient genotype; and

determining clinical outcome for said patient based on said patient genotype, wherein determining said clinical outcome is indicative of a human immunoresponse to a disease.

27. (Original) The method of claim 26 wherein genotyping utilizes PCR typing with a sequence specific primer for a polymorphic exon.

28. (Original) The method of claim 27 wherein said primer is selected from the group consisting of those shown in SEQ ID Nos. 1, 2, 3 and 4.

29. (Original) The method of claim 26 wherein genotyping comprises purifying FcαRI expressing cells from said patient; extracting nucleic acids from said cells; and determining whether the nucleic acid encodes a predetermined polymorphic FcαRI nucleic acid sequence.

30. (Original) The method of claim 29 wherein the nucleic acid is selected from the group consisting of: RNA and DNA.

Claims 31-33 (Cancelled)

34. (Currently Amended) A commercial package comprising reagents for identifying single nucleotide polymorphisms in a FcαRI genotype or phenotype for FcαRI alleles selected from the group consisting of: FcαRIa 87R/87R, FcαRIA 92D/92N, FcαRIa 132F/132L, FcαRI 245P/245L and FcαRI 248S/248G together with instructions for use thereof as a test to identify individual susceptibility to a disease.

Claim 35 (Cancelled)

36. (Currently Amended) A method for correlating ~~response~~ FcαRI induced function of a cell expressing FcαRI ~~to binding FcαRI ligand~~ and cellular susceptibility to a disease, said method comprising:

identifying a FcαRI genotype of the cell for FcαRI allele selected from the group consisting of: FcαRIa 87R/87R, FcαRIa 92D/92N, FcαRIa 132F/132L, FcαRI 245P/245L and FcαRI 248S/248G;

quantifying ~~response to binding~~ FcαRI ligand induced function by the cell expressing the FcαRI genotype;

comparing ~~response to binding~~ FcαRI ligand induced function by the cell and ~~response to binding~~ FcαRI ligand induced function by a second cell, the second cell expressing a second FcαRI genotype, wherein correlation of the ~~response~~ FcαRI induced function of a cell ~~to binding~~ FcαRI ligand and cellular susceptibility to disease is indicated by a difference in ~~response~~ FcαRI induced function detected by the comparing.

37. (Previously Presented) The method of claim 36 wherein the FcαRI genotype differs from the second FcαRI genotype by a point mutation.

38. (Previously Presented) The method of claim 37 wherein the point mutation is a frame shift mutation.

39. (Previously Presented) The method of claim 37 wherein the point mutation is a missense mutation.

40 (Previously Presented) The method of claim 37 wherein the point mutation alters a phosphorylation site of FcαRI.

41. (Previously Presented) The method of claim 40 wherein the phosphorylation site is a casein kinase I phosphorylation site.

42. (Currently Amended) The method of claim 36 wherein the ~~response~~ FcαRI induced function is activation of an enzyme.

43. (Currently Amended) The method of claim 36 wherein the ~~response~~ FcαRI induced function is induction of phagocytosis.

44. (Currently Amended) The method of claim 36 wherein the ~~response~~ FcαRI induced function is induction of oxidative burst.

45. (Currently Amended) The method of claim 36 wherein the ~~response~~ FcαRI induced function is induction of cytokine production.

46. (Currently Amended) The method of claim 36 wherein the ~~response~~ FcαRI induced function is release of collagenase.